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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,068	05/31/2001	Sei-Joo Jang	P01-04	9299
25759	7590	12/05/2003	EXAMINER	
JOHN J. ELNITSKI, JR. 225 A SNOWBIRD LANE BELLEFONTE, PA 16823			JONES, STEPHEN E	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,068

Applicant(s)

JANG, SEI-JOO

Examiner

Stephen E. Jones

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-9, 12-14 and 17-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5/31/01.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, species I (Figs. 15 and 20-22) in Paper No. 9/9/03 is acknowledged. The traversal is on the ground(s) that the additional species and inventions would not increase the work load of the examiner. This is not found persuasive because of the various non-obvious differences between the various embodiments, and because of the divergent subject matter of Group II.

The requirement is still deemed proper and is therefore made FINAL.

Also, Applicant did not indicate which of Claims 1-18 read on the elected species. To expedite prosecution the examiner presumes that Applicant intended to indicate that all of the claims 1-18 of Group I read on the elected species. However, upon further examination Claims 1-9 appear to more appropriately read on a non-elected species such as Species V (Fig. 30) since a desired frequency between the 1st and 2nd connectors is exchanged between stacked resonators of a filter. Also, Claims 11-14 and 17-18 appear to more appropriately read on non-elected Fig. 32.

2. Accordingly, Claims 1-9, 11-14, 17-18, and 19-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 9/9/03.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. in combination with Livingston.

Satoh (Figs. 19-20) teaches a filter including: input/output connectors (103); multiple conductive resonator cavities having dielectric puck resonators (105); the resonator cavities are connected in series to pass a signal from the input to the output.

However, Satoh does not teach having two of the filters formed as a duplexer such that one filter is for transmission and the other is for receiving having a common antenna connector (Claim 10); that the two filters are stacked (Claim 15), or that the sides of the resonators of the respective two filters are positioned relative to the side-by-side positioning of the cavities (Claim 16).

Livingston (Fig. 2) teaches that the transmission and reception filters of a duplexer (i.e. a duplexer) can be in a stacked configuration with a common antenna connector (110).

It would have been considered obvious to one of ordinary skill in the art to have formed a duplexer using two of the Satoh filters in a stacked and mirrored relationship including a common antenna such as taught by Livingston (which as a consequence would have resulted in the sides of the resonators being relative to the positioning of the side-by-side cavities), because forming a duplexer would have provided the advantageous benefit of a common antenna communication device that is capable of both transmitting and receiving, and also would have provided the advantageous benefit

of minimizing the required mounting space on the mounting substrate since the device would have been more narrow than if the two filters were connected horizontally, thereby suggesting the obviousness of such a modification.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pelz et al. teaches a duplexer having a common antenna connector.

Ishikawa et al. teaches a dielectric resonator filter.

Snyder et al. teaches stacked resonator filters.

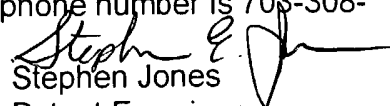
Shu et al. teaches series dielectric resonator cavities.

Sonoda et al. (e.g. Fig. 13) teaches a dielectric resonator duplexer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 703-305-0390. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 703-308-4909. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Stephen Jones
Patent Examiner
Art Unit 2817

SEJ